

## **REMARKS**

### A. Background

Claims 1-19 were pending in the application at the time of the Office Action. Claims 1-19 were rejected as being obvious over cited art. By this response applicant has amended claims 1, 5, 12, and 13. As such, claims 1-19 are presented for the Examiner's consideration in light of the following remarks.

### B. Proposed Amendments

Applicant has herein amended claims 1, 5, 12, and 13 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. For example, claims 1, 5, 12, and 13 have been amended to clarify that it is the dispersion slope “of the transmission optical fiber” that changes with respect to temperature changes. These amendments to the claims are supported throughout the specification and more specifically at least by page 8, lines 12-16, page 15, lines 4-8, and page 16, lines 8-10. In view of the foregoing discussion, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

### C. Rejection based on 35 USC § 103

#### 1. Claims 1-7, 9-15, 17 and 19

Paragraphs 1 and 2 of the Office Action reject claims 1-7, 9-15, 17 and 19 under 35 USC § 103(a) as being obvious over U.S. Patent No. 6,925,262 to Ooi et al. (“*Ooi*”) in view of U.S. Publication No. 2003/0161580 to Morin et al (“*Morin*”). Applicant respectfully traverses this rejection and submits that the allegedly obvious combination would not include all of the

limitations recited in the rejected claims. Of the rejected claims, claims 1, 12, and 13 are independent claims.

As discussed in Applicant's prior paper submitted on May 28, 2008, *Ooi* is directed to a method and system for compensating chromatic dispersion. See Title. *Ooi* discloses that the system monitors and compensates for chromatic dispersion changes, and takes into account slope changes caused by transmission distance changes. See col. 5, lines 27-30. However, *Ooi* discloses in various locations therein that the slope changes being monitored are only due to changes in the transmission distance. See, e.g., col. 31, lines 31-44. In fact, *Ooi* recites that in its system, "the dispersion slope of a transmission line does not change with a temperature change." Col. 6, lines 15-16, emphasis added; see also Figure 5 and col. 5, lines 40-41.

To compensate for this deficiency of *Ooi*, the Office Action cites to *Morin*, alleging that "Morin teaches a dispersion slope changes with respect to temperature changes." The Examiner asserts that "[i]t would have been obvious ... to modify the invention of Ooi, and have a dispersion slope [that] changes with respect to temperature changes, as taught by Morin." Applicant respectfully disagrees.

*Morin* is directed to a dispersion compensator for the compensation of chromatic dispersion in a multi-channel light signal. See Abstract. The dispersion compensator is an optical structure having Bragg gratings. See Abstract. *Morin* discloses that tuning of the Bragg wavelength of the grating components can be achieved by applying a temperature gradient to the Bragg gratings, which cause the dispersion and dispersion slope of the Bragg gratings to correspondingly change. See paragraphs [0033], [0084], and [0095]. In other words, *Morin* is directed to changing the temperature gradient of Bragg gratings, which changes the dispersion slope of the Bragg gratings. As such, *Morin*, like *Ooi*, is not directed to a system wherein the

dispersion slope of a transmission optical fiber changes with respect to temperature changes. Furthermore, the invention disclosed in *Morin* is directed only to a compensation method in contrast to the claimed inventions of the present application, which are directed to a monitoring method and apparatus (claims 1-4 and 12), and a compensation method and apparatus using a dispersion variation amount obtained by the monitoring method (claims 5-11 and 13-19).

In light of the foregoing, Applicant submits that even if, *arguendo*, *Ooi* and *Morin* were combined in the allegedly obvious manner set forth in the Office Action, the combination would not disclose or suggest a method of or apparatus for monitoring a dispersion on a transmission optical fiber in a wavelength division multiplexing optical transmission system “in which a transmission distance is fixed and the dispersion of the transmission optical fiber has a slope that changes with respect to temperature changes,” as recited in amended claims 1 and 12, or a method of or apparatus for compensating a temperature dependency of a dispersion slope in a wavelength division multiplexing optical transmission system “in which a transmission distance is fixed and the dispersion slope of a transmission optical fiber changes with respect to temperature changes,” as recited in amended claim 13.

In view of the foregoing discussion, Applicant submits that a *prima facie* case of obviousness has not been established at least because the allegedly obvious combination of *Ooi* and *Morin* would not include all of the limitations recited in the rejected claims. Accordingly, Applicant respectively requests that the obviousness rejection with respect to claims 1, 12, and 13 be withdrawn.

Claims 2-7, 9-11, 14, 15, 17 and 19 depend from claims 1, 12, and 13 and thus incorporate the limitations thereof. As such, applicant submits that claims 2-7, 9-11, 14, 15, 17 and 19 are distinguished over the cited art for at least the same reasons as discussed above with

regard to claims 1, 12, and 13. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 2-7, 9-11, 14, 15, 17 and 19 also be withdrawn.

2. Claims 8, 10, 16, and 18

Paragraph 3 of the Office Action rejects claims 8, 10, 16 and 18 under 35 USC § 103(a) as being obvious over *Ooi* in view of *Morin* and further in view of U.S. Patent No. 6,396,982 to *Lin* (“*Lin*”). *Lin* was merely cited for “using one or more tunable dispersion equalizers with a fiber Bragg grating.” Applicant respectfully traverses this rejection.

Claims 8, 10, 16 and 18 depend from claims 1 and 13 and thus incorporate the limitations thereof. As such, even if, *arguendo*, it would have been obvious to combine the allegedly obvious combination of *Ooi* and *Morin* with *Lin* in the allegedly obvious manner set forth in the Office Action, the resulting combination would still not cure the deficiencies of *Ooi* and *Morin* with regard to claims 1 and 13. As such, Applicant submits that claims 8, 10, 16 and 18 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 1 and 13. Accordingly, Applicant respectfully requests that the obviousness rejection with regard to claims 8, 10, 16 and 18 be withdrawn.

No other objections or rejections are set forth in the Office Action.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art.

Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1-19 as amended and presented herein.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefor and charge any additional fees that may be required to Deposit Account No. 23-3178.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 11th day of December 2008.

Respectfully submitted,

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